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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/808,621

03/24/2004

Anand Ganesh Dabak

TI-28940.1

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23494

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04/06/2005

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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,621

Applicant(s)

DABAK ET AL.

Examiner

Qutub Ghulamali

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by the applicant's admitted prior art.

Regarding claims 1, 9 and 10, the prior art discloses (figures 1-6):

a measurement circuit (432) coupled to receive an input signal from at least one of a first antenna and a second antenna of a transmitter, the measurement circuit producing an output (produces) signal (425) corresponding to the input signal (page 6, lines 7-14); and
a comparator circuit (426) coupled to receive the output signal and a first reference signal, the comparator circuit arranged to produce a control signal in response to a comparison of the output signal and the first reference signal, producing the TPC control symbol in response to step of comparing when the out signal has a value less or greater than a value of the first reference signal (increase or decrease transmit power for subsequent transmission) (page 6, lines 9-14).

Regarding claim 2, the prior art discloses a comparator circuit further coupled to receive a second reference signal and wherein the comparator circuit arranged to produce the control signal in response to a comparison of the output signal, the first reference signal and the second reference signal (page 3, lines 7-16).

As per claim 3, the prior art discloses:

an estimate circuit coupled to receive the input signal, the estimate signal producing plural estimate signals corresponding to the first antenna and the second antenna, respectively (page 6, lines 16-26);

an averaging circuit (412) coupled to receive the estimate signals, the estimate circuit arranged to produce respective averages of the plural estimate signals (page 6, lines 5-9); and

a ratio circuit coupled to receive the respective averages, the ratio circuit arranged to produce an output signal corresponding to a ratio of the respective averages (page 5, lines 19-25; page 6, lines 1-3, 9-14).

As per claims 4, 5 and 16, the prior art further discloses (fig. 3) a plurality of pilot symbols (304) and at least one pilot symbol of a wideband code division multiple access signal (WCDMA) (page 2, lines 6-14).

As per claim 6, 13 the prior art discloses (fig. 5) a Doppler estimate circuit coupled to receive the input signal (samples pilot symbols from preferably 6 time slots for a Doppler frequency of less than 80 Hz and from preferably 4 time slots for a Doppler frequency of 80 Hz or more); and

a delay profile estimate circuit (fig. 6), to receive input signals (mobile antenna 212), delay profile circuit (610) provide a one-symbol delay T so that the output signals are produced simultaneously.

As per claims 7, 8 the prior art discloses (fig. 5) a channel estimate circuit coupled to receive sampled output signal, arranged to produce a variable number of channel estimates

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corresponding to the output signal (this channel estimate is used to correct the phase of received data symbols in time slot 527 for a respective transmit antenna) (page 6, lines 16-26).

Regarding claims 11, the prior art discloses producing a third control signal in response to the step of comparing when the output has a value between (average) the value of the first reference signal and the value of the second reference signal (page 5, lines 21-25; page 6, lines 1-3).

As per claim 12, the prior art discloses producing a plurality of channel estimates in response to one of the first control signal and the second control signal (page 6, lines 5-14); and Producing less than the plurality of channel estimates in response to the other of the first control signal and the second control signal (page 6, lines 16-26)

Regarding claims 14, 15 and 18, the prior art discloses an estimate circuit coupled to receive an input signal from at least one of a plurality of transmit antennas and coupled to receive a control signal, the control signal corresponding to a number of the at least one of a plurality of transmit antennas, the estimate circuit selectively producing a first estimate signal and a second estimate signal in response to the control signal (page 6, lines 16-26); a correction circuit coupled to receive the input signal, the first estimate signal and the second estimate signal, the correction circuit producing a corrected input signal (page 6, lines 23-26); a combiner circuit coupled to receive the corrected input signal, the combiner circuit producing a combined input signal (summed) (page 5, lines 19-24; page 6, lines 27-28; page 7, lines 1-9); and a decoder circuit (406) coupled to receive the combined input signal, the decoder circuit arranged to decode the combined input signal, thereby producing the control signal (page 5, lines 22-25).

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As per claims 17 and 19, the prior art discloses a wideband code division multiple access signal (fig. 3), the control signal comprise a transmit diversity signal (page 4, lines 6-18).

As per claim 20, the prior art further discloses (table 1) and (fig. 2) wherein the input signal comprises (fig. 1), a data signal of a primary common control physical channel (pccpch) (page 2, lines 23-29).

Double Patenting

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F. 2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F. 2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claims 21-24 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-4 of prior U.S. Patent No. 6,728,302. This is a double patenting rejection.

Allowable Subject Matter

5. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents:

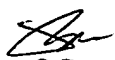
Lo et al (US Patent 6,470,043), Dabak et al (US Patent 6,424,679), Eilts (US Patent 6,393,073), Alamouti et al (US Patent 6,501,803) are cited as arts of interest showing space-time diversity in communication systems.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014.

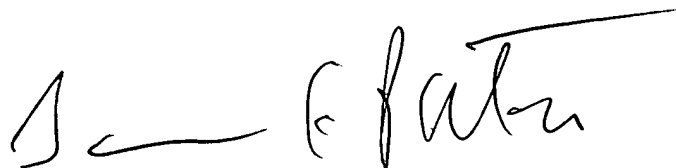
The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


QG.

April 1, 2005.



**JAY K. PATEL
SUPERVISORY PATENT EXAMINER**